

Curriculum vitae — Michal Beneš, Ph.D.

Born on the 2nd of August in 1978 in Litoměřice, Czech Republic.

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WWW: <http://www.wonderland.cz/>

Education

- 2001–2005 Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic
Ph.D. degree in mathematics
thesis: Asymptotic behavior of regular orbits of C_0 semigroups
- 2004 Marie Curie scholarship at University Karlsruhe, Germany (six months)
- 2000–2002 Eberhard Karls University, Tübingen, Germany
master degree in mathematics; Thesis: Spectral mapping theorem
- 1996–2001 Faculty of Mathematics and Physics, Charles University, Prague
master degree in mathematics; Thesis: Spectral mapping theorem

Extra study activities

ACM International Programming Contest, world finals:

2001 Vancouver, Canada—bronze medal

2000 Orlando, USA—bronze medal

Mathematical Competition for University Students:

2000 London, United Kingdom—first price

1999 Balaton, Hungary—first price

1998 Blagoevgrad, Bulgaria—first price

Olympiad in Mathematics, Physics, Informatics for secondary schools:

1996 International Olympiad in Mathematics, Mumbai, India—silver medal

1995 International Olympiad in Physics, Canberra, Australia—bronze medal

Employment

December 2007 – present, Alnair Team-leader C/C++/Java
January 2006 – November 2007, ITonis CZ Team-leader C/C++
March – December 2005, Xeris Senior C/C++ developer

Xeris, ITonis CZ and Alnair were three companies developing an IPTV platform, now being sold under the brand name Nangu^{TV}, which is now the leading IPTV platform for alternative internet service providers in Czech and Slovak Republics.

Development:

Media-oriented clustered storage (C++): build-in redundancy and load-balancing

Media caching server (C++)

RTSP compliant streamer (C++): simultaneous streaming of up to 2000 (depending on configuration) of different 2.5Mbps streams from HDD

Special purpose IPTV streamers and tools (C++)

Management tools (C++, Python, Perl, Shell, SQL)

Media acquisition system: encoder (using GStreamer), encoding workflow management (Python, Django)

Application server (J2EE, Hibernate, Spring)

Responsibilities:

Development in C/C++, Java (J2EE), Python

Formal system analysis

Ensuring whole Nangu^{TV} platform design and integrity

Supervising team of cca. 5 developers

Solving critical situations

Interaction with customers and partners

August–September 2001, Komerční Banka Praha
Middle Office employee, department of reconciliation

Language skills

Czech (native speaker), English, German

Computer skills

Experience with a large project analysis

Ability to write a high quality code (adhere to the given performance constraints, good readability/structure, low bug ratio)

Experience with heavily multi-threaded programming

Ability to learn fast and comprehend large systems

Good knowledge of *C*, *C++*, *J2EE*, *Python*

Experience with *Perl*, *Shell scripting*, *SQL*, *XML*...

Knowledge of common programming paradigms

Basic Linux/UNIX administration (Linux user since 1996)

Other interests

Hierarchical self-learning systems. Brain and mind theory. Karate-do. Hiking.

Interesting non-commercial software projects

These project were developed mostly during my studies in spare-time. The source code is freely available. Note that the source does not necessarily represent the quality of my current commercial projects.

Rewrite of the engine for *The Lord of the Rings* computer game (Interplay, 1990, 1993): reverse engineering of the original data files (2 different compression algorithms, one video format)

reverse engineering and implementation of two different scripting languages

additional Python scripting support

21000+ lines of code in C, 700+ LOC in Python

<http://www.wonderland.cz/lotr/>

Years: 2003–2009

System for management of Karate-do tournaments (according to JKA rules) called *Tatami*: web-based application written using Django framework

4000+ lines of code in Python

<http://www.wonderland.cz/tatami/>

Years: 2008–2009

E-learning platform *Tulka Whiteboard*:

server-client architecture, nearly 7000 lines of code (LOC) in Java, 700+ LOC Perl, 700+ LOC Shell, developed for the Virtugrade project (Tübingen)

<http://www.karlin.mff.cuni.cz/~benes/tulka/>

Years: 2000–2002

J2ME experience:

A Java game for the Siemens C55 mobile phone

2000+ LOC of heavily optimized Java code

Years: 2003

Various contributions to GStreamer framework related to Nangu^{TV} platform

Initial design of a base class for muxers with sparse streams `gstcollectpads2`

<http://gstreamer.freedesktop.org/>

Years: 2005–2007